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(21) Application number: **09079945**(22) Date of filing: **31.03.97**(30) Priority: **01.04.96 FI 96 961465**(71) Applicant: **NOKIA MOBILE PHONES LTD**(72) Inventor: **HEINONEN JARMO**

(54) **TRANSMITTER-RECEIVER SENDING/RECEIVING RADIO FREQUENCY SIGNAL FOR TWO FREQUENCY BANDS** COPYRIGHT: (C)1998,JPO

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain a simple transmitter-receiver that sends/receives a radio frequency(RF) signal for two frequency bands in which an expensive intermediate frequency filter or the like is not required and one synthesizer is enough for the purpose.

SOLUTION: The transmitter-receiver of the direct conversion system is used and when the transmitter-receiver is in operation for two frequency bands, a mixed signal is generated by a synthesizer 40. Preferably a frequency of an output signal of the synthesizer 40 is used for a mixed frequency or the like for a comparatively high operating frequency and when the transmitter-receiver is operated at a comparatively low operating frequency, the frequency of the output signal of the synthesizer 40 the mixed signal obtained by dividing the frequency of the output signal of the synthesizer 40 at an integer 2 or over at 1st and 2nd frequency divider blocks 11, 61 being frequency dividers.

